**IN THE UNITED STATES DISTRICT COURT**
**FOR THE EASTERN DISTRICT OF TEXAS**
**MARSHALL DIVISION**

| | | |
|---|---|---|
| NINGDE AMPEREX TECHNOLOGY LIMITED,<br><br>*Plaintiff*,<br><br>v.<br><br>ZHUHAI COSMX BATTERY CO., LTD.,<br><br>*Defendant*. | §<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§ | **CIVIL ACTION NO. 2:22-CV-00232-JRG** |

**CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER**

In this patent case, Ningde Amperex Technology Ltd. ("ATL") asserts claims from three patents—U.S. Patent Nos. 10,964,987 (the "'987 Patent"), 10,833,363 (the "'363 Patent"), and 11,329,352 (the "'352 Patent")—against Zhuhai CosMX Battery Co., Ltd. ("CosMX"). Each of these patents relates to battery technology. *See* '987 Patent at 1:14–16 ("The application relates to the field of energy storage devices, and in particular, to a separator and an energy storage device."); '363 Patent at 1:13–15 ("The present disclosure relates to the technical field of energy storage technologies . . . ."); '352 Patent at 1:6–7 ("The present invention relates to the field of secondary batteries . . . .").

The parties dispute the scope of three terms from two of the patents. From the '987 Patent, CosMX challenges the phrase "a ratio of Dv90 of the inorganic particles to the thickness of the porous layer" in Claim 1 as indefinite. From the '363 Patent, the parties dispute the scope of two related terms—"dinitrile compound" and "trinitrile compound." Having considered the parties'

briefing, along with arguments of counsel during an August 15, 2023 hearing, the Court resolves the disputes as follows.

## I. LEGAL STANDARDS

### A. Generally

"[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). As such, if the parties dispute the scope of the claims, the court must determine their meaning. *See, e.g.*, *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1317 (Fed. Cir. 2007) (Gajarsa, J., concurring in part); *see also Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996), *aff'g*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc).

Claim construction, however, "is not an obligatory exercise in redundancy." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Rather, "[c]laim construction is a matter of [resolving] disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims . . . ." *Id.* A court need not "repeat or restate every claim term in order to comply with the ruling that claim construction is for the court." *Id.*

When construing claims, "[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning." *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13). Courts must therefore "look to the words of the claims themselves . . . to define the scope of the patented invention." *Id.* (citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1313. This "person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in

which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1312). For certain claim terms, "the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314; *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) ("We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history."). But for claim terms with less-apparent meanings, courts consider "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Phillips*, 415 F.3d at 1314.

**B. Indefiniteness**

"[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc*., 572 U.S. 898, 901 (2014). The claims "must be precise enough to afford clear notice of what is claimed," but that consideration must be made while accounting for the inherent limitations of language. *Id.* at 908; *see also Williamson*, 792 F.3d at 1352 ("Under 35 U.S.C. § 112, paras. 2 and 6, . . . if a person of ordinary skill in the art would be unable to recognize the structure in the

specification and associate it with the corresponding function in the claim, a means-plus-function clause is indefinite."). "Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

## II. THE LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art is the skill level of a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In resolving the appropriate level of ordinary skill, courts consider the types of and solutions to problems encountered in the art, the speed of innovation, the sophistication of the technology, and the education of workers active in the field. *Id.* Importantly, "[a] person of ordinary skill in the art is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Here, only CosMX proffers a level of ordinary skill in the art. For the '987 Patent, CosMX contends a skilled artisan

> would have had at least a bachelor's degree or equivalent degree from an accredited institution in chemistry, chemical engineering, materials science, or a similar discipline covering relevant principles of organic and inorganic chemistry, polymer processing, ceramic materials, and ceramic processing, as well as three or more years of experience in electrochemical energy storage devices, lithium-ion battery technology, separators, characterizations and analyses of particle size, film thickness, and/or materials compositions, battery performance characterization, or other applications of polymer chemistry, ceramic chemistry, and ceramic processing.

Dkt. No. 128 at 4 (citing Miller Decl., Dkt. No. 128-16 ¶¶ 47–48). For the '363 Patent, CosMX contends a skilled artisan "would have had a Ph.D. or similar advanced degree in chemistry, chemical engineering, materials science, or a related field, and two or more years of experience related to the design, research, evaluation, preparation, and/or manufacture of electrochemical

energy storage devices." *Id.* (citing Miller Decl., Dkt. No. 128-16 ¶ 112). Since ATL does not contest these proposed levels of ordinary skill in the art,[1] the Court adopts them for its analysis.

## III. THE DISPUTED CLAIM TERMS

### A. "a ratio of Dv90 of the inorganic particles to the thickness of the porous layer is in a range from 0.3 to 3.0" ('987 Patent, Claim 1)

| ATL's Construction | CosMX's Construction |
|---|---|
| Plain and ordinary meaning. | Indefinite. |

#### *1. Background*

The '987 Patent relates to a separator, which is a material positioned between the cathode and anode of certain types of batteries. Separators provide a barrier between the anode (negative) and the cathode (positive) while enabling ions to move from one side to the other—that is, while allowing electricity to flow. Over time, however, a gap may develop between the separator and the electrodes that degrades the battery's life. *See* '987 Patent at 1:20–34.

The '987 Patent attempts to address that problem. The separator taught by the patent has a porous layer, which is made up of a porous binder and inorganic particles, and a porous substrate. *Id.* at [57]. The pores in the porous layer promote conductivity. *See id.* at 4:10–21. The inorganic particles occupy the pores and support the porous layer, thus inhibiting the collapsing and compressing of the porous layer that happens over time. *Id.* at 4:22–27. Essentially, the patent tries to balance the volume of inorganic particles in the pores to maintain good mechanical support without significantly decreasing conductivity. As the patent explains,

> [i]f the volume ratio of the inorganic particles to the binder is too low, the average pore size of the porous layer will be decreased, and the porosity of the porous layer

[1] In fact, ATL's expert, Dr. Adam Cohn, adopts Dr. Miller's proposed level of ordinary skill in the art for the '987 Patent. *See* Cohn Decl., Dkt. No. 114-4 ¶ 13.

> will be decreased; moreover, if the content of inorganic particles is decreased, the mechanical strength and heat resistance of the porous layer is decreased. If the volume ratio of the inorganic particles to the binder is too high, the adhesive force of the porous layer will be reduced, and the porous layer is easily detached from the surface of the porous substrate, resulting in deterioration of the safety performance of the energy storage device (such as a lithium-ion battery).

*Id.* at 4:57–65.

The patent sets the size of inorganic particles based on "Dv90," which "refers to a particle size which reaches 90% [of] the cumulative volume from the side of small particle size in the granularity distribution on a volume basis." *Id.* at 1:53–56. The bounds of the acceptable volume of inorganic particles in the layer, according to the patent, is "a ratio of Dv90 of the inorganic particles to the thickness of the porous layer . . . in a range from 0.3 to 3.0." *Id.* at [57]. A higher ratio increases the mechanical strength of the layer which inhibits pore blockage due to compression, *id.* at 5:28–31, but if the ratio is *too* high, the porous layer tends to have a non-uniform surface, which makes detachment from the substrate more likely, *id.* at 5:43–49. Also, an excessively high ratio may reduce the adhesive force of the porous layer to the substrate. *Id.* at 5:50–54.

The sole disputed term is the last phrase of Claim 1, which recites:

> 1. A separator, comprising:
>
> a porous substrate; and
>
> a porous layer arranged on a surface of the porous substrate, wherein the porous layer comprises inorganic particles and a binder, and *a ratio of Dv90 of the inorganic particles to the thickness of the porous layer is in a range from 0.3 to 3.0.*

'987 Patent at 16:25–30 (emphasis added). CosMX contends this term is invalid because the intrinsic record does not specify how to measure Dv90, and there are different known measurement techniques and instruments that yield materially different results. Dkt. No. 128 at 5–6. But

according to ATL, a skilled artisan would know how to use a standard method to make the measurement. Dkt. No. 114 at 6 (citing *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369 (Fed. Cir. 2017)). ATL argues "Dv90 is a 'widely understood concept and a physical attribute of a particulate material' and is 'commonly reported by material suppliers.'" *Id.* at 6 (quoting Cohn Decl., Dkt. No. 114-4 ¶ 18). Further, says ATL, the industry has established tools and methods for measuring the Dv90 of a given particle sample. *Id.* at 7.

Regarding CosMX's contention that different measurement tools and methods may produce different results that render the claims indefinite, ATL notes scientific data is often expressed with a margin of error. Dkt. No. 114 at 7. Further, says ATL, that experimental measurements may be difficult to calculate with precision does not per se render the limitation indefinite. *Id.* at 8 (quoting *Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, 240 F. Supp. 3d 605, 633 (E.D. Tex 2017) (Bryson, J.)).

*2. Discussion*

"[D]ifferences in measurement methods must matter for determining whether or not a patent claim limitation is met by those who might realistically be practicing the other claim limitations." *Ball Metal Bev. Container Corp. v. Crown Packaging Tech., Inc.*, 838 Fed. App'x 538, 542 (Fed. Cir. 2020). Accordingly,

> a claim may be invalid as indefinite when (1) different known methods exist for calculating a claimed parameter, (2) nothing in the record suggests using one method in particular, and (3) application of the different methods result in materially different outcomes for the claim's scope such that a product or method may infringe the claim under one method but not infringe when employing another method.

*Id.*[2] Applying this test to the present facts, the Court must consider whether CosMX has carried its clear-and-convincing burden on each of these points with respect to the measurement of "Dv90" of the inorganic particles.

a. Whether different known methods exist for calculating Dv90 of the inorganic particles

CosMX asserts there are multiple common techniques for measuring Dv90 of inorganic particles that a skilled artisan would have known at the time of invention. Dkt. No. 128 at 5. ATL does not appear to dispute this point. In fact, its expert explains a skilled artisan at the time of invention would have understood "different tools or methods can be used to characterize the particle size distribution of a given sample of particulate material and determine the corresponding Dv10, Dv50, and/or Dv90 values." Cohn Decl., Dkt. No. 128-10 ¶ 19. According to Dr. Cohn, Laser Diffraction (LD) is "the preferred method and most common way to determine Dv90," but if a sample is not well suited for LD, "a POSITA might resort to other methods such as acquiring images of the material using scanning electron microscopy and then performing image analysis." *Id.* ¶ 20. Given Cohn's declaration, CosMX has carried its burden of showing different known methods exist for calculating Dv90 of inorganic particles.[3]

[2] Although *Ball Metal* is non-precedential, it succinctly summarizes the applicable law.

[3] During the hearing, ATL emphasized a skilled artisan would recognize laser diffraction as the appropriate method for measuring Dv90, but this assertion is undercut by its expert's declaration and statements made in related IPR papers. *See, e.g.*, Patent Owner's Prelim. Resp., Dkt. No. 128-14 at 1 (asserting "Dv90 must be experimentally measured and is routinely measured *using one or more of the well-known and accepted methodologies* for measuring volume particle size distribution" (emphasis added)).

b. Whether the record suggests using one method in particular for calculating Dv90 of the inorganic particles

CosMX asserts "[n]othing in the '987 intrinsic record specifies a particular method for measuring Dv90, let alone a preferred method." Dkt. No. 128 at 6–7. ATL does not address this point in either its opening brief or its reply. *See* Dkt. No. 114 at 6–10; Dkt. No. 132 at 6–8. Thus, CosMX has also carried its burden on this point.

c. Whether application of the different methods result in materially different outcomes for the claim's scope such that a product or method may infringe the claim under one method but not infringe when employing another method.

Here things get murkier. In essence, the parties dispute the sufficiency of the evidence a defendant must proffer to prove the third part of *Ball Metal*'s test. CosMX cites a number of publications suggesting different testing methods "are *likely* to yield materially different results," Dkt. No. 128 at 9 (emphasis added), but provides no testing results of its own. ATL replies that CosMX's assertion that different test methods and/or equipment *would* lead to "materially different results" is unsupported by the publications. Dkt. No. 132 at 7.

The Federal Circuit considered similar facts in *Takeda Pharm. Co. v. Zydus Pharms. USA, Inc.*, 743 F.3d 1359 (Fed. Cir. 2014). In *Takeda*, Claim 1 of the asserted patent was directed to a pharmaceutical comprising "fine granules having an average particle diameter of 400 μm or less." *Takeda*, 743 F.3d at 1362 (quoting U.S. Patent 6,328,994 at 37:43–53). Similar to CosMX's position here, Zydus argued Claim 1 was indefinite because it did not specify the method of measurement that should be used to determine average particle diameter, and there were several methods that could potentially be used for that measurement. *Id.* at 1366. Thus, said Zydus, infringement would turn on the measurement technique used. *Id.*

The appellate court held otherwise. Although the parties agreed different methods could produce different results from the same sample, there was no evidence the differences between these techniques were significant. *Id.* at 1367 (noting there was no evidence "that different measurement techniques *in fact* produced significantly different results for the same sample" (emphasis added)). Since there were measurements of the accused product using both laser diffraction and optical microscopy, and since those results were substantially similar, "any theoretical minor differences between the two techniques [were] therefore insufficient to render the patent invalid." *Id.*

Here, there are no actual measurements for the Court to consider.[4] Instead, CosMX asserts expert opinion and various publications show "different test methods provide materially different results." Dkt. No. 128 at 9. But CosMX then suggests different methods *might* provide materially different results. For example, CosMX points to one source for the proposition that "adaptions of the same basic physical principle *can* [rather than *will*] give rise to significant variations in the measured size." *Id.* at 10 (quoting *Particle Size Characterization*, Dkt. No. 128-3 at 3). Similarly, CosMX points to another source for the proposition that "different PSDs will *often* result from different techniques," *id.* at 11 (quoting *Particle Size Measurement Fundamentals*, Dkt. No. 128-11 at 14–15; emphasis added), but that does not mean those PSDs will be *materially* different, and how often is "often"? Other sources suggest Dv90 values are "extremely sensitive" to the technique and tools and are "greatly influenced by particle morphology," *id.* at 12, but that does not necessarily translate to *materially* different results. CosMX also points to a study that shows "an almost two times difference in reported Dv90s between different laser diffraction instruments,"

[4] To be clear, the Court is not suggesting actual measurements are necessary to resolve the dispute one way or another.

*id.* at 12 (citing Naito, Dkt. No. 128-25 at 52), but the figure on which CosMX relies does not show whether the chance of "materially different results" is a "certainty" or "a mere possibility."

Finally, even the declaration of CosMX's expert, Dr. Miller, deals in possibilities of "materially different results." For example, he opines "[b]imodal distributions, like those common for inorganic particles, can make using Dv90 challenging," Miller Decl., Dkt. No. 128-16 ¶ 60, but "challenging" is not "impossible." Similarly, he opines "ordinary artisans at the time of the '987 [Patent's effective filing date] would be aware that different test methodologies and instruments *could* lead to differing Dv90 measurements," *id.* ¶ 100 (emphasis added), but "could" is nebulous and "differing Dv90 measurements" does not equate to "*materially different* Dv90 measurements."

According to Dr. Miller, the difference between two pairs of examples from the specification is small enough to be affected by the measurement technique or instrument. Depending on the measurement or instrument, the resultant ratio *may* fall within or outside the scope of the claims. Miller Decl., Dkt. No. 128-16 ¶¶ 106–07 (concluding the difference between calculated Dv90s for Example 1 and Comparative Example 1 on the one hand, and Example 7 and Comparative Example 2 on the other hand, "would likely be less than variations that occur between different Dv90 techniques"). However, this could be true for even a specified measurement method like laser diffraction. In other words, given the well-defined boundaries for the claimed ratio, even multiple measurements using the same method may cause the measured ratio to fall within or outside the scope of the claims depending on any number of factors.

"Clear and convincing evidence" requires "an abiding conviction that the truth of the factual contention is 'highly probable.'" *Am-Pro Protective Agency, Inc. v. United States*, 281 F.3d 1234, 1240 (Fed. Cir. 2002) (quoting *Price v. Symsek*, 988 F.2d 1187, 1191 (Fed. Cir. 1993)). Here,

the "factual contention" is that different measurement methods result in materially different outcomes for the claim's scope. While CosMX has shown characterizing particle size distribution is challenging and that Dv90 values are extremely sensitive to measurement techniques, the Court is not left with an "abiding conviction" different measurement methods "result in materially different outcomes for the claim's scope such that a product or method may infringe the claim under one method but not infringe when employing another method." Accordingly, the Court holds CosMX has not carried its burden of showing the term is indefinite.

### B. "dinitrile compound" and "trinitrile compound" ('363 Patent, Claim 1)

| ATL's Construction | CosMX's Construction |
|---|---|
| Plain and Ordinary Meaning. | Dinitrile compound: "a compound with two cyano groups." Trinitrile compound: "a compound with three cyano groups." |

#### *1. Background*

The '363 Patent concerns the problem of deteriorating positive electrodes of batteries at "high" voltages. Specifically, the patent suggests that at above 4.4 volts oxidation of the positive electrode terminal increases and stability decreases, ultimately resulting in a decrease in battery capacity. '363 Patent at 1:24–33.

To address this problem, the patent teaches an electrolyte applied to the terminal that inhibits the increase in DC internal resistance of the battery, so the battery "has excellent cycle and storage performance." *Id.* at 3:10–13. According to the patent, the inventors unexpectedly found that using a mixture of a dinitrile compound, a trinitrile compound, and a propyl propionate will form a firm protective film on the surface of the cathode that does not easily decompose. *Id.* at 1:49–54. Claim 1 recites the corresponding invention as:

> An electrolyte, comprising a dinitrile compound, a trinitrile compound, and propyl propionate, wherein, based on a total weight of the electrolyte, a weight percentage of the **dinitrile compound** is X and a weight percentage of the **trinitrile compound** is Y, where X and Y meet conditions represented by Formula (1) and Formula (2):
>
> about 2 wt % ≤ $(X+Y)$ ≤ about 11 wt % (1); and
>
> about 0.1 ≤ $(X/Y)$≤about 8 (2),
>
> wherein, based on the total weight of the electrolyte, a weight percentage of the propyl propionate is Z, where Y and Z meet a condition represented by Formula (3):
>
> about 0.01 ≤ $(Y/Z)$ ≤ about 0.3 (3).

'363 Patent at 33:2–15 (emphasis added).

The parties dispute the scope of "dinitrile compound" and "trinitrile compound." They agree the "di-" and "tri-" prefixes in these terms refer to the number of cyano groups[5] in the compound, but disagree as to the numerical meaning of those prefixes. According to CosMX, in accordance with "basic chemistry naming conventions," "di-" means "exactly two" and "tri-" means "exactly three." Dkt. No. 128 at 23. ATL, however, suggests "di-" means "at least two" and "tri-" means "at least three." Dkt. No. 114 at 12 (asserting "an electrolyte infringes the '363 patent so long as it includes both an organic compound having *at least two cyano groups* and an organic compound having *at least three cyano groups*").

Despite its position the "plain and ordinary meaning of the terms is simple and clearly laid out," *id.* at 11, ATL's position is based more on lexicography. It points to the specification's statements that "the electrolyte comprises a compound comprising two cyano groups (herein also referred to as 'a dinitrile compound') [and] a compound comprising three cyano groups (herein

[5] A cyano group consists of a carbon atom triple bonded to a nitrogen atom.

also referred to as 'a trinitrile compound')." *Id.* (citing '363 Patent at 1:40–43).

*2. Discussion*

Before considering whether the applicant defined these terms, the Court must first decide their "plain and ordinary meanings"—that is, their meanings to a skilled artisan as of the patent's effective filing date. Here, despite numerous assertions the terms' "plain and ordinary meanings" align with its constructions of "at least two" and "at least three," ATL presents no evidence of that.[6] Instead, ATL points to the portion of the specification that it alleges defines the terms. *See, e.g.*, Dkt. No. 114 at 11–12.

In contrast, CosMX supports its position with expert opinion and other evidence. Dr. Miller, who holds a Ph.D. in chemistry, opines that "[u]nder basic chemistry naming conventions, known as nomenclature, an ordinary artisan understands that dinitrile compounds are compounds with *two* nitriles and trinitrile compounds are compounds with *three* nitriles, and not some other number of nitriles." Miller Decl., Dkt. No. 128-16 ¶ 113. Qiao Zeng, a named inventor of the '363 Patent, testified similarly. *See* Zeng Depo. Tr., Dkt. No. 128-30 at 94:25–95:7 ("Q. Can a dinitrile compound have three cyano groups? . . . A. No. If it has three cyano group[s], it will be named as trinitrile."). Based on this evidence from CosMX, and the lack of any contrary evidence from ATL,

[6] In its reply, ATL asserts CosMX's expert (1) confirmed "a nitrile" is a compound with at least one cyano group, and (2) did not consider how "comprising" in the alleged definition impacted the meaning of "dinitrile" and "trinitrile." Dkt. No. 132 at 9 (citing Miller Depo. Tr., Dkt. No. 114-5 at 171:17–19 and 178:22–179:4). As to the first assertion, Dr. Miller testified "people refer to compounds with multiple cyano groups as nitriles generally." Dkt. No. 114-5 at 171:17–19. That the class of compounds known as "nitriles" might include both a dinitrile and trinitrile compound is both uncontroversial and wholly irrelevant to the plain meaning of the disputed terms. As for the second assertion, the impact of "comprising" in the alleged definition is also irrelevant to the "plain meanings" of the terms.

the Court concludes the plain and ordinary meanings of these terms align with CosMX's constructions.

The question, then, is whether the applicant's statement that "the electrolyte comprises a compound comprising two cyano groups (herein also referred to as 'a dinitrile compound') [and] a compound comprising three cyano groups (herein also referred to as 'a trinitrile compound')" defines these terms such that a dinitrile compound could include two *or more* cyano groups and a trinitrile compound could include three *or more* cyano groups. Lexicography must be clear. *See Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) ("[A] patentee must 'clearly set forth a definition of the disputed claim term'" and "'clearly express an intent' to redefine the term." (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Here, however, the Court sees neither a clear definition nor a clear intent to define the terms. At most, ATL points to language from the specification that is consistent with the terms' plain and ordinary meanings. The Court therefore holds there is no lexicography as urged by ATL and adopts CosMX's proposed constructions for these terms.

## IV. CONCLUSION

| Term | The Court's Construction |
|---|---|
| "a ratio of Dv90 of the inorganic particles to the thickness of the porous layer is in a range from 0.3 to 3.0"<br>('987 Patent, Claim 1) | Plain and ordinary meaning. |
| "dinitrile compound" and "trinitrile compound"<br>('363 Patent, Claim 1) | **Dinitrile compound:** "a compound with two cyano groups."<br>**Trinitrile compound:** "a compound with three cyano groups." |

The Court **ORDERS** each party not to refer, directly or indirectly, to its own or any other

party's claim-construction positions in the presence of the jury. Likewise, the Court **ORDERS** the parties to refrain from mentioning any part of this opinion, other than the actual positions adopted by the Court, in the presence of the jury. Neither party may take a position before the jury that contradicts the Court's reasoning in this opinion. Any reference to claim construction proceedings is limited to informing the jury of the positions adopted by the Court.

**So ORDERED and SIGNED this 18th day of October, 2023.**

RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE